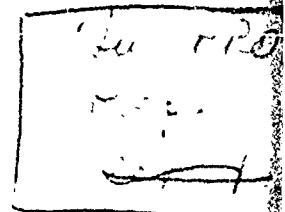


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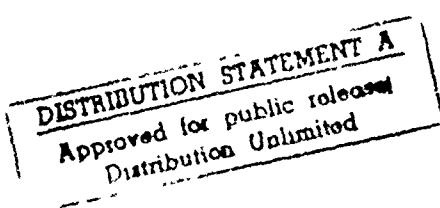
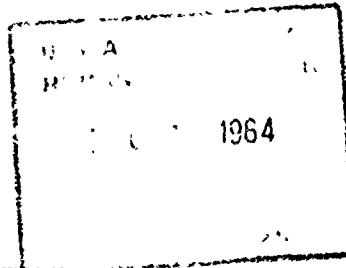
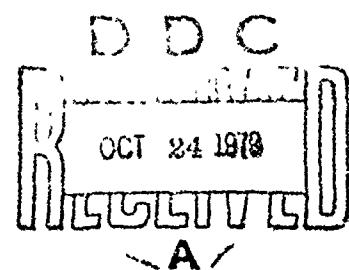
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REPORT ON TECHNICAL ADVISORY SERVICES,

Fiscal Year 1964

by

J.C. Rupe



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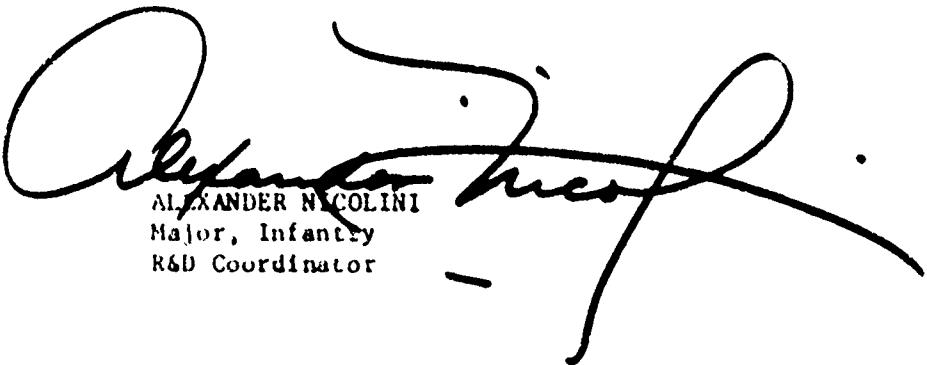
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⑥ REPORT ON
TECHNICAL ADVISORY SERVICES,

Fiscal Year 1964

by

⑩ J.C. Rupe

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⑪ Oct 1964
The George Washington University
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INTRODUCTION

The HumRRO annual report of Technical Advisory Services (TAS) is published to provide the reader with information about the scope, variety, significance, and extent of the services and to serve HumRRO and appropriate Army agencies as a basis for future program planning and budgeting.

TAS is an information-providing activity usually initiated in response to a consumer request occurring under either of the following conditions:

- (1) If a reliable basis for providing the information exists within the body of relevant knowledge.
- (2) If only trend information exists, but the time available to either the responding research group or the potential user does not permit initiation of research.

TAS information is provided to the requester by oral report, memorandum, or Consulting Report, depending upon the anticipated breadth of interest and/or the amount of effort expended.

Assistance given in the implementation of HumRRO recommendations from a specific research effort comes under (1) above. It has been reported as TAS in the Tables that follow, even though it was started under a research Task while that Task was active. Services based on a Task are frequently given while it is still active. Sometimes experience gained during the research is immediately relevant to current operational problems. Often research products are also found extremely useful when applied to current problems. For example, job performance tests, prepared to test the efficacy of experimental training, have been found more generally useful. Of course, completed Tasks may continue to serve as a basis for providing TAS when needed.

TAS is also given in areas not related to a specific Task. Such TAS may fall under either condition (1) or condition (2) above. It is based upon the competence of HumRRO professional personnel. This competence may be in a special area and limited to specific individuals, or it may be more general, gained as a result of the training and experience required to achieve professional status. Many of the activities reported here are consultations of this nature.

Technical Advisory Services for Fiscal Year 1964

In the Office of the Director, TAS is almost continuous. There are frequent visitors from the other United States military services and the Allied military, seeking specific information. Many requests are received each month for publications, for research findings in specific areas related to the HumRRO mission, and for professional assistance over a broad spectrum.

The Director of HumRRO maintains a representative at Headquarters, United States Continental Army Command (USCONARC). This representative and his assistant provided liaison on HumRRO matters and consultation on training problems and performed special projects. The following are representative of the TAS activities performed at Headquarters, USCONARC during FY 1964:

- (1) Statistical analysis of a comparison between six- and eight-week basic combat training programs.
- (2) Preparation of guidance on the conduct of tests of the effectiveness of Army training programs.
- (3) Consultation with the Airborne Department of the Quartermaster School on Parachute Rigger training.
- (4) Development of training objectives for training cooks.
- (5) Preparation of suggested revisions to a DA pamphlet on programmed instruction based on reviews made by all elements of HumRRO.
- (6) Review of Army MOS Subject Schedules 5-120, "Pioneer and Construction Helper"; 10-546, "Laundry, Bath, and Impregnation Specialist," MOS 546.1; 6-153, "Field Artillery Surveyor," MOS 153.0; and 5-626, "Construction Machine Operator."

One major TAS activity began during this period, after the issuance of the "Report on Recruit Training" by the then Undersecretary of the Army, Stephen Ailes, on 26 December 1963. As a consequence of the decision to implement the recommendations of that report, HumRRO was requested by Headquarters, USCONARC, to assist in preparing plans, documents, and programs. The Training Center Human Research Unit (TCHRU) was called upon for major support because of the relevance of Tasks TRANSITION, RIFLEMAN, and NCO. However, much past and current research by other research groups was also relevant, and personnel from these other groups and the Director's Office were also involved.

From the beginning of February until the end of March, 44 professional man-days had been expended on this effort. As noted in Table 3, Drs. Hood, Ward, Caylor, and Bialek of TCHRU were involved in the early planning and outlining of the attack upon the problem. Beginning 23 March, Dr. Hood, TCHRU, Dr. MacCaslin, Training Methods Division, Mr. Warnick and Mr. Cook, Armor Human Research Unit, and Mr. Hayes, Director's Office, spent 202 man-days in close cooperation with Army Training Center (ATC) experts at Fort Jackson, S.C. They assisted the USCONARC Trainer Preparation Project staff in developing detailed course objectives, programs of instruction, and evaluation techniques for officer and enlisted personnel scheduled for ATC trainer assignments. USCONARC administered these courses to the first class this summer, and Dr. Hood continues to assist in evaluation of the training, proposed modifications, and preparations for further applications.

Tabular presentations of the TAS activities of the HumRRO Divisions and Human Research Units follow, including estimates of the total amount of time expended.

**TABULAR PRESENTATION OF TECHNICAL ADVISORY SERVICES
BY HumRRO DIVISIONS AND UNITS**

1 July 1963 - 30 June 1964

Tables 1-7

KEY TO ABBREVIATIONS IN TABLES

| | | | |
|-------------|--|------------|---|
| AIT | advanced individual training | POI | programs of instruction |
| AMC | Army Materiel Command | SDR | small device requirement |
| ARO | Army Research Office | SOP | standing operating procedures |
| ATC | Army Training Center | SPW | special purpose infantry weapon |
| ATP | Army training program | TC | training circular |
| ATT | Army training test | TM | technical manual |
| BCT | basic combat training | TR | Technical Report |
| BuPers, USN | Bureau of Personnel, U.S. Navy | USAADCEN | U.S. Army Air Defense Center, Fort Bliss, Tex. |
| BUT | basic unit training | USAADS | U.S. Army Air Defense School, Fort Bliss, Tex. |
| CBR | chemical, biological, and radiological | USAARMBD | U.S. Army Armor Board, Fort Knox, Ky. |
| CG | Commanding General | USAARMC | U.S. Army Armor Center, Fort Knox, Ky. |
| COMTRALANT | Commander, Training Command, U.S. Atlantic Fleet | USAARMS | U.S. Army Armor School, Fort Knox, Ky. |
| COMTRAPAC | Commander, Training Command, U.S. Pacific Fleet | USAAVNS | U.S. Army Aviation School, Fort Rucker, Ala. |
| CRD | Chief of Research and Development | USAAVNTBD | U.S. Army Aviation Test Board, Fort Rucker, Ala. |
| CRDL | Chemical Research and Development Laboratories, Edgewood, Md. | USABRL | U.S. Army Ballistics Research Laboratories, Aberdeen Proving Ground, Md. |
| DA | Department of the Army | USAISAGAR | U.S. Army Combat Developments Command, Armor Agency, Fort Knox, Ky. |
| DCSIT | Deputy Chief of Staff for Individual Training, USCONARC, Fort Monroe, Va. | USACDC | U.S. Army Combat Developments Command |
| DIA | Defense Intelligence Agency, U.S. Army Element | USACDCAVNA | U.S. Army Combat Developments Command, Aviation Agency, Fort Rucker, Ala. |
| DLI | Defense Language Institute | USACDCIA | U.S. Army Combat Developments Command, Infantry Agency, Fort Benning, Ga. |
| DLI, WCB | Defense Language Institute, West Coast Branch, Presidio of Monterey, Calif. | USACDCTA | U.S. Army Combat Developments Command, Transportation Agency, Fort Eustis, Va. |
| DOD | Department of Defense | USACGSC | U.S. Army Command and General Staff College, Fort Leavenworth, Kan. |
| DOI | Director of Instruction | USAIC | U.S. Army Infantry Center, Fort Benning, Ga. |
| ES | Exploratory Study | USAIS | U.S. Army Infantry School, Fort Benning, Ga. |
| ETST | engineer task service test | USAMRL | U.S. Army Medical Research Laboratory, Fort Knox, Ky. |
| HEL | Human Engineering Laboratories, Aberdeen Proving Ground, Md. | USAREUR | United States Army, Europe |
| HFORD | Human Factors and Operations Research Division | USASESCS | U.S. Army Southeastern Signal School, Fort Gordon, Ga. |
| IHRU | Infantry Human Research Unit, Fort Benning, Ga. | USATC | U.S. Army Training Center |
| LOH | light observation helicopter | USATSCH | U.S. Army Transportation School, Fort Eustis, Va. |
| MAAG | military assistance advisory group | USCONARC | U.S. Continental Army Command, Fort Monroe, Va. |
| MOS | military occupational specialty | USMA | United States Military Academy, West Point, N.Y. |
| NCO | noncommissioned officer | | |
| NTDC | Naval Training Devices Center, Port Washington, N.Y. | | |
| OCRD | Office of the Chief of Research and Development | | |
| OCRD-CRD/R | Office of the Chief of Research and Development, Communications Electronics Division | | |
| PI | programmed instruction | | |

Table 1
Training Methods Division

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|--|----------------|---|----------------------|
| REPAIR* | Participated in conference on feasibility of consolidating training for MOSs 311, 312, and 313 (Infantry, Armor, Artillery Communications Specialist Training). | Military Personnel Management, USCONARC | Jul 63 | Dr. Vineberg | 1 |
| FORECAST** | Assisted U.S. Navy in the application of FORECAST principles and techniques to LORAN training through training of Navy technicians and preparation of course materials. | COMTRALANT, U.S. Navy | Jul 63- Jun 64 | Dr. Shriver Mr. Trexler Mr. Lodge | 196 |
| FORECAST** | Consultation for the improvement of the FORECAST-LORAN course as presented by Navy at the Fleet Training Center, San Diego. | COMTRAPAC, U.S. Navy | Dec 63 | Dr. Shriver Mr. Trexler | 10 |
| JOBTRAIN IV** | Continuing from FY 63. Development of a field test of a method for building training programs for first enlistment electronics maintenance MOSs that will permit substantial reduction in formal schooling without decrease in performance capabilities. | USASESCS | Jul- Aug 63 | Mr. Gebhard Mr. Lodge | 35 |
| Not Task-Related | Prepared comments on "The Value of LOGEX as an Applicatory Exercise for Career Course Officer Students," paper by Col. T.E. Shaughnessy. | USCONARC | Aug 63 | Dr. Fink | 4 |
| Not Task-Related | Conducted a briefing on programmed instruction for visitors from Allied military. | Royal Canadian Air Force and Australian Army | Oct 63 | Dr. Vineberg Dr. Seidel | 2 |

----- (Continued) -----

*Completed Task.

**Task not in FY 64 Work Program.

Table 1 (Continued)
Training Methods Division

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|--|---|--------------------------|----------------------------------|---|----------------------|
| Not Task-Related | Evaluated questionnaire data and planned reporting model for a maintenance manpower study. | USACDCTA | Oct 63-Jan 64 | Dr. MacCaulin | 3.5 |
| Not Task-Related | Evaluated vehicle simulators. Attended USCONARC meeting to discuss trainer evaluation proposal. | DCSIT, USCONARC; USATSCB | Nov 63-Jun 64 (Continuing as ES) | Dr. McKnight Mr. Hunter Dr. deHaan | 123 |
| Not Task-Related | Prepared report on an analysis of classified problem dealing with man-packed jungle radios. | OCRD-CRD/R | Dec 63-Jan 64 | Dr. Lyons Dr. Fink | 19 |
| Not Task-Related | Prepared interim Consulting Report, "Human Factors in Tactical Nuclear Combat"; classified project. | USACDC | Dec 63-Jun 64 | Dr. Vineberg Mr. Montague Miss Bloxom | 213 |
| Not Task-Related | Reviewed draft DA pamphlet on PI. | HFORD | Jan 64 | Dr. Seidel | 1 |
| FORECAST** | Applied FORECAST principles to Navy MK-44 Torpedo System. Project proposal submitted in March; approved; work to begin FY 65. | BuPers, USN | Mar 64 | Dr. Shriver | 3 |
| Not Task-Related | Developed procedures for handling "student load" problems. | DLI | May-Jun 64 | Dr. Fink | 16.5 |
| Not Task-Related | Developed training program for cadre duty in ATC. | USCONARC | Mar-May 64 | Dr. MacCaulin | 54 |
| Not Task-Related | Reviewed MOS subject schedule, "Light and Heavy Vehicle Operator." | USCONARC | Jun 64 | Dr. McKnight | 1 |
| Both Task-Related and Not Task-Related | Conducted consultations (15 of one-half day or less), human factors evaluations, and assistance on various training problems. | OCRD, USCONARC | Jul 63-Jun 64 | Dr. Lyons et al. | 10 |

**Task not in FY 64 Work Program.

Table 2
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|--|--|----------------------------------|---------------|--|----------------------|
| ARMOR-NITE X** | Continued work on field test of gunner proficiency in flank localization with an experimental reticle (conducted jointly by Armor Unit and Armor School). Conducted further data analysis, and submitted a report of the work. | USCONARC | Aug 63-Mar 64 | Dr. Easley Dr. Willard Mr. Battick | 70 |
| Not Task-Related | Assisted in preparation of an aptitude test battery to classify Armor School students by aptitude level for instruction in nuclear tactics and employment. | Command and Staff Dept., USAARMS | Mar 64 | Dr. Baker | 1 |
| Not Task-Related (Minaturization and Simulation) | Visited 17 installations in Seventh Army, to discuss problems involved in planning "a study of means to overcome existing limitations to training in USAREUR." Prepared report of problems and suggested solutions for use of military and research personnel concerned. | ARO, USAREUR | Feb 64 | Dr. Baker | 23 |
| Not Task-Related | Provided representative from CRDL with technical advice on the design and conduct of studies of effects of CBR agents on performance. | CRDL | Jan 64 | Mr. Cook | 2 |

----- (Continued) -----
**Task not in FY 64 Work Program.

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|---|-------------------------------------|--|----------------------|
| Not Task-Related | Administered an equipment serviceability criterion, which involved planning the conduct of the test, coordination, administering two forms of the test (truck and tank), and writing a Consulting Report on the results and effectiveness of the test. | U.S. Army Maintenance Bd., Fort Knox, Ky. | Sep-Oct 63 | Dr. J.P. Smith Dr. Cannon Mr. Farnick Mr. Pickett | 78 |
| Not Task-Related | Reviewed proposed equipment test for the new battlefield day. Submitted summary of work in a letter report. | USAARMBD | Nov 63 | Dr. Haggard | 3 |
| Not Task-Related | Provided assistance for representatives from Redstone Arsenal on the design of evaluation studies for helicopter missile sighting systems. | USACAGAR | Aug 63 | Dr. Haggard | 2 |
| Not Task-Related | Conferred with representative from Frankford Arsenal, Philadelphia, Pa. on gunnery requirements in armor vehicles. | Frankford Arsenal, Philadelphia, Pa. | Aug 63 | Dr. Haggard | 4 |
| Not Task-Related | Prepared and presented briefing on a proposed human factors program for the new main battle tank as a result of a meeting on the plan for a survey of human engineering changes for concepts proposed for the main battle tank. | USAARMBD | Aug-Nov 63 | Dr. Haggard Mr. Osborn | 21 |
| Not Task-Related | Reviewed literature and current status of research on confinement and fatigue. Prepared and submitted a summary of the work as a Consulting Report. | USACAGAR | Aug 63-Jun 64 (Continuing as ES) | Dr. Cannon | 120 |

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|-------------------|------------|------------------------------|----------------------|
| Not Task-Related | Provided Dunlap and Associates with data on SS-10 and on human factors variables involved in mobile simulation. | HEL | Mar 64 | Dr. Haggard | 3 |
| Not Task-Related | Consulted on and reviewed a proposed manual of standard practice for human factors in vehicle fighting compartments. | HEL | Feb 64 | Dr. Haggard Dr. E. Miller | 3 |
| Not Task-Related | Reviewed proposals resulting from USACAGAR's contract with the Ohio State University Research Foundation, and the contract research completed to date. | USACAGAR | Feb 64 | Dr. Haggard | 2 |
| Not Task-Related | Reviewed the automotive mechanic training program at the USA Ordnance School. Studied the feasibility of administering the performance proficiency tests developed during Task MOBILITY to recent Ordnance School graduates. Submitted report on the School program, with recommendations. | USCONARC | Feb 64 | Dr. Willard Dr. Waltmore | 12 |
| Not Task-Related | Provided technical assistance in connection with the Trainer Preparation Course, a program being developed at Fort Jackson for officers and NCOs who are to make up cadre for BCT. | USCONARC | Mar-May 64 | Mr. Warnick Mr. Cook | 42 |

----- (Continued) -----

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|---|--------------------------------------|--------------------------|----------------------|
| RECON | Provided technical assistance on how to build and use the Armored Cavalry Trainer for the 1st Training Brigade, which has been using the terrain display system in teaching armored cavalry tactics during armor AIT. | 1st Training Brigade, USATC, Armor | Jan-Jun 64 | Dr. Baker Mr. Warnick | 5 |
| Not Task-Related | Gave technical advice on the implementation of the Miniature Armor Battlefield (MAB) for USAARMC personnel and representatives from NTDC. | USAARMC | Mar 64 | Dr. Baker | 2 |
| Not Task-Related | Provided technical information on problems of procurement and operation pertaining to the MAB. | G3, Seventh Army | Sep 63 | Dr. Baker | 2 |
| NCO | Met with personnel of the NCO Academy, Fort Knox, to review program difficulties encountered in implementing Task NCO. | | Aug 63 | Mr. Warnick | 1 |
| Not Task-Related | Assisted in developing a test for use with the POI for the revised TM 38-750. | U.S. Army Maintenance Bd., Fort Knox, Ky. | Sep-Oct 63 | Dr. Whitmore | 15 |
| Not Task-Related | Presented a briefing on extended operations at a conference held at USACAGAR with representatives from HEI, and USAMRL, after completing considerable exploratory work. | USACAGAR | Oct 63 (Continuing as future ES.) | Dr. Cannon | 66 |
| UNIT II* | Consulted on plans for implementing the Combat Decisions Game (CDG) for use by the Virginia National Guard. | Training Aids, Second United States Army | Jun 64 | Dr. Baker Mr. Warnick | 1 |

*Completed Task.

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|---|----------------------------------|---|----------------------|
| UNIT II* | Provided technical advice for the implementation of MAB by evaluating an NTDC improvement in the basic design of the battlefield to make possible an expanded playing field. | NTDC | May 64 | Dr. Willard Col. Davies Dr. Baker | 3 |
| Not Task-Related | Evaluated an attitude questionnaire to be administered to subordinates in the GI office, Fort Knox. | GI, USAARMC | May 64 | Dr. Cannon | 0.5 |
| Not Task-Related | Provided samples of forms or blanks to collect data on the training and experience of maintenance personnel for use in accounting for materiel deficiencies. Observed training sessions held for inspection teams. | U.S. Army Maintenance Bd., Fort Knox, Ky. | Jun 64 | Dr. J.P. Smith | 5 |
| Not Task-Related | Conferred with representative from Picatinny Arsenal on the Proposed Project BRIGHTEYE. | Picatinny Arsenal, Dover, N.J. | Jun 64 | Dr. Willard Col. Davies Dr. Haggard Mr. Cook | 2 |
| Not Task-Related | Collected relevant reference material and designed training method to develop a substitute for Seventh Army's Tank Crew Qualification Course. | ARO: USCONARC | Apr-Jun 64 (Continuing as ES) | Dr. Baker Mr. Warnick | 26 |

----- (Continued) -----

*Completed Task.

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|-----------------------------------|----------------------------------|-----------------------------|----------------------|
| Not Task-Related | Began development of an SOP for use by the Army Maintenance Bd. in developing equipment serviceability criteria. Began preparation of Consulting Report. Developed procedures for formulating a set of requirements and for testing their adequacy as a model in deriving performance requirements in Tasks VE-TRAIN III and TRAINTECH (1965 Work Program). | | Jan-Jun 64 (Continuing) | Dr. Whitmore Mr. Pickett | 84 |
| Not Task-Related | Reviewed literature on the problem of an infrared night seeing device, and made inputs for the Phase I NITE OPS Study (USACDC); submitted a draft on probable effects on night operations of human factors problems that may arise through introduction of night vision devices, 1968-1970. | USACAGAR | Jan-May 64 (Continuing as ES) | Dr. Easley | 15 |
| Not Task-Related | Completed studies on Shillelagh gunnery problems: (a) tracking proficiency, end of AIT, and after further training; (b) interference caused by obscuration, jump, and flare effects. Completed data analysis; submitted classified preliminary report on tracking proficiency. | USCONARC; AMC, Weapons Command | Sep 63-Jun 64 | Dr. Haggard | 139 |

Table 2 (Continued)
Armor Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|---------------------------------|---|-------------------|------|--------------------|----------------------|
| Not Task-Related (Continued) | Other Unit work on the Shillelagh included: (a) measuring the simulator tracking proficiency of gunners who will fire the ETST, so as to relate the scores later to ETST performance; (b) Armor Center discussions on AIT training requirement to meet Shillelagh demands; (c) an in-process review (at NTDC) of the Shillelagh weapon system trainer, including a Unit summary of the simulator studies; (d) a conference sponsored by the Weapons Command on modifications of the equipment testing program suggested by the Command as a result of the Unit's simulator studies. | | | | |

Table 3
Training Center Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|--|--------|-------------------------|----------------------|
| Not Task-Related | Guest discussion leader for Leadership Seminar. | USMA | Sep 6 | Maj. Gen. Sebree (Ret.) | 4 |
| NCO | Furnished 2,000 copies of the NCO Guide for the Potential Noncommissioned Officer, to be distributed to all men SP 4 and below. | 11th Air Assault Division, Fort Benning, Ga. | 1963 | | |
| NCO | Assisted in instituting NCO Preparation Course for the Boy Scouts of Monterey Peninsula, to be adopted nation-wide by the National Convention at Monterey (resulted in letter of appreciation from Chief Scout Executive, J.A. Brunton, Jr., to Sec. McNamara and from CRD, Lt. Gen. Dick). | Boy Scouts of Monterey Peninsula, Calif. | 1963 | Dr. Hood | Largely off-duty |
| NCO | Furnished information on the NCO Automated Program together with complete scripts to be used in Navy training. | Dept. of Navy | 1963 | | 2 |
| RIFLEMAN IV | Participated in conference to develop training plans for the new MOS 112 and 114 and to discuss revised AIT program. | USCONARC | Jan 64 | Dr. Ward | 4 |
| RIFLEMAN | Reviewed ATP critically for infantry BCT-AIT proposed by CG, Fort Gordon, that would reduce ATC training to 12 weeks and require deferred subjects to be taught in BUT. | USCONARC | Jan 64 | Dr. Ward | 2 |
| RIFLEMAN | Assisted in preparation of scripts on the Role of the Light Weapons Infantryman, I-Rifle Squad in Defense; II-Rifle Squad in Attack, for making two motion picture films. | USAIS | Jan 64 | Col. Fooks (Ret.) | 16 |

Table 3 (Continued)
Training Center Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|-------------------|-------------------|--|----------------------|
| Not Task-Related | Participated at Fort Polk and Fort Monroe in AIT conference to consider the Ailes report and new AIT program and to assist HQ USCONARC in developing replies to the Ailes report. | HQ USCONARC | Feb 64 | Dr. Ward Dr. Bialek Dr. Caylor Dr. Hood | 44 |
| TRANSITION | Participated with BCT Div. on revision of end-of-cycle BCT proficiency test, ATT 21-2. Consulted on revised ATP 21-114 and other recommendations of Ailes report. | USCONARC | Dec 63- Jun 64 | Dr. Caylor Dr. Burdick Dr. Lyman | 301 |
| NCO | Implemented training program for ATC trainers. | USCONARC | Mar- Jun 64 | Dr. Hood | 64 |
| Not Task-Related | Conducted high level leadership studies. | USACGSC | Mar- Jun 64 | Maj. Gen. Sebree (Ret.) | 32.5 |

Table 4
Infantry Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|----------------------|---|-------------------|-------------------|--|----------------------|
| RIFLEMAN BASICTRAIN* | Continued from FY 63. Conducted consultations concerning the revision of ATP 7-18, course for AIT for Light and Heavy Weapons Infantrymen. | USAIS | Jul 63 | Dr. Ward Col. Kelly (Ret.) Col. Fooks (Ret.) (LHRU) | 14 |
| RIFLEMAN | Participated in meetings on tactical doctrine for offense and defense at level of platoon and rifle company and assisted in preparations for making training films on Rifle Squad in Defense and Rifle Squad in Attack. | USAIS | Sep-Nov 63 | Mr. Powers Col. Kelly (Ret.) | 1.5 |
| RIFLEMAN V | Provided assistance and materials in the development of a land navigation training circular which in turn supported the development of MOS 111 and 112 Subject Schedules. | USAIS USCONARC | Sep 63- Jan 64 | Mr. Powers | 16.5 |
| RIFLEMAN V | Conducted consultations in preparation for and review of land navigation training film TF 7-3360, "Land Navigation by Terrain Features," written into the 18-hour POI compiled by IHRU and Map Reading Committee. | USAIS | Sep- Feb 64 | Mr. Powers | 3 |
| RIFLEMAN V | Evaluated a demonstration at Fort Gordon of the implementation of the advanced land navigation program. | USAIS | Nov 63 | Mr. Powers | 2 |
| Not Task-Related | Consulted on the human factors considerations in the selection of top priority infantry material requirements. | USACDCIA | Aug 63 | Mr. Powers | 1.5 |

*Completed Task.

Table 4 (Continued)
Infantry Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|-------------------------------|-------------------|---------------------------------|----------------------|
| Not Task-Related | Critically reviewed draft report, "Study to Conserve the Energy of the Infantryman," and attended conference for discussion of recommendations made. | USACDCIA | Aug- Sep 63 | Col. Kelly (Ret.) | 2 |
| Not Task-Related | Prepared and delivered an invited address on motivation. | U.S. Naval Inst. of Ind. Rel. | Sep 63 | Dr. Olmstead | 5 |
| Not Task-Related | Analyzed Leadership Analysis Questionnaire. | USACGSC | Sep- Oct 63 | Dr. Jacobs | 15 |
| LEAD | Consulted on leadership training and PI research. Included seminar on PI for 30 to 40 people and discussed building a research capability at West Point for which Unit would provide continuing TAS. Later, leadership course material was furnished Unit for review and comments furnished West Point. | USMA | Jan- May 64 | Dr. Lange Dr. Jacobs | 28.5 |
| Not Task-Related | Acted as adviser to Project LASER during demonstration by industrial firm. Critically reviewed classified document. Standby consultant for continued participation. | USACDCIA | Sep 63- Jan 64 | Mr. Powers | 1.5 |
| Not Task-Related | Participated in Ad Hoc Committee assigned to study the problem of the organization proposed for infantry squad, platoon, company, battalion, and brigade using weapons and equipment available in FY 67. | CG USAIC | Jan- Apr 64 | Col. Kelly (Ret.) Dr. Jacobs | 15.5 |

----- (Continued) -----

41

Table 4 (Continued)
Infantry Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|--|--|--|---------------|--|----------------------|
| Not Task-Related | Reviewed and commented on draft manual "Tactical Employment of the M60 Machinegun" prepared by Weapons Dept., USAIS. | Weapons Dept., USAIS | Jan 64 | Col. Kelly (Ret.) | 2 |
| Not Task-Related | Participated in conference to give guidance to USABRL, and information on rifle targets in combat, and to develop realistic, comprehensive tests of small arms including SPIW. | USACDCIA, USABRL | Mar 64 | Col. Kelly (Ret.) | 1.5 |
| Not Task-Related | Consulted on the human factors implications in the use of night viewing and surveillance devices to be used in the preparation of an annex to a classified document. | USACDCIA | Mar-Apr 64 | Dr. Jacobs Mr. Powers | 5 |
| Not Task-Related | Addressed Middle Management Workshop on "Organizational Climate and Motivation." | Civilian Personnel Sec., USAADCEN | Jun 64 | Dr. Olmstead | 1.5 |
| Both Task-Related and Not Task-Related | Conducted consultations (18 of one day or less) concerning technical, tactical, statistical, and human factors problems; reviews of draft papers, rating systems, and plans of test; and so forth. | Agencies assisted were mainly those of USAIS but also included USACDCIA, 82nd Airborne Division, USAIC, Allied military, and industry. | Jul 63-Jun 64 | All professional staff participated in one or more | 12 |

Table 5
Air Defense Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|--------------------------------------|-------------------|---------------------------|----------------------|
| Not Task-Related | Prepared Consulting Report on the determination of minimum math skills required for Basic Electronics. | USAADS | Jul 63 | Dr. Cox Mr. Montgomery | 42 |
| LOCK-ON* | Reviewed, on formal request, training circulars and Army subject schedules concerned mainly with implementation of Task LOCK-ON principles in Hawk and Hercules systems. | USAADS | Jul 63- Feb 64 | Dr. Melching | 35 |
| Not Task-Related | Reviewed, on formal request, specifications for task and skill analysis and training aids feasibility study. | USAADS | Aug 63 | Dr. Rogers | 4.5 |
| MAINTRAIN** | Reviewed training aid - job aid proposal made by Republic Aviation Corp. | USAADS | Jan 64 | Dr. Rogers | 2 |
| Not Task-Related | Determined extent to which a fire direction system operator may become confused when required to learn a second set of symbols with new or altered meanings; prepared Consulting Report. | USAADS | Dec 63- Mar 64 | Dr. Bergum Mr. Barrell | 202 |
| VIGIL | Developed plan of test to implement TR 85 on HAWK equipment. | USAADS, USCONARC | Mar- Apr 64 | Dr. Baldwin Mr. Wright | 16 |
| Not Task-Related | Addressed Middle Management Workshop on "Management Resources and Processes." | Civilian Personnel Sec., USAADCEN | Apr 64 | Mr. Montgomery | 3 |
| Not Task-Related | Reviewed and commented on first and second drafts of TC 44-9, "Nike Hercules Fire Control Platoon Training Guide." | USAADS | May 64 | Dr. Melching | 2 |

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*Completed Task.

**Task not in FY 64 Work Program.

Table 5 (Continued)
Air Defense Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|---|--------------------------|------------|---|----------------------|
| Not Task-Related | Reviewed and commented on draft POI for Digital Fundamentals Training Course. | USAADS | May 64 | Dr. Baldwin Dr. Rogers | 1 |
| Not Task-Related | Reviewed and commented on "Human Engineering Guide to Equipment Design." | Office of Naval Research | May 64 | Dr. Baldwin Dr. Rogers Mr. Frederickson | 2 |
| Not Task-Related | Conducted study of backward chaining to determine effect of presenting instruction in reverse order for fixed procedural tasks. | DCSIT, USCONARC | May-Jun 64 | Dr. Cox Mr. Boren Dr. Baldwin Dr. Melching | 50 |

Table 6
Aviation Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|-------------------------------|----------------|---|----------------------|
| Not Task-Related | Continued from FY 63. Further evaluated Aviation Training Device 2-B-12A in revised prototype form. | USAAVNTBD; NTDC | Jul- Sep 63 | Dr. Prophet Mr. Boney Dr. Caro Maj. Haid | 18 |
| Not Task-Related | Conducted consultation evaluating a device, "Radiological Aerial Survey Simulation System" (RADASSIS), in the invention stage for use in the radiological survey course. Since basic problems in training are navigational, further development was not recommended. | DOI, USAAVNS | Sep 63 | Dr. Boyles Mr. Boyd | 1 |
| Not Task-Related | Conducted feasibility study concerning development of selection procedures for the students entering the Mohawk (AV-1) Gunnery Training Course. | DOI, USAAVNS | Oct 63 | Dr. Dawkins | 28 |
| Not Task-Related | Assisted in making a human factors evaluation of the Sikorsky S-64 Flying Crane at Fort Benning. | USAAVNTBD | Nov 63 | Mr. Boyd Dr. Wright | 2 |
| Not Task-Related | Developed a questionnaire, rating scale, and statistical analysis of data, and provided psychometric ratings of LOH maintenance mechanics. | USAAVNTBD | Dec 63- Jan 64 | Mr. Paisley Dr. Gray | 26 |
| Not Task-Related | Conducted consultation and instruction on the determination of behavioral objectives in connection with USCONARC directive for maintenance POIs involving 2200 hours of instruction. | Dept. of Maintenance, USAAVNS | Jan 64 | Dr. Dawkins | 1 |

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Table 6 (Continued)
Aviation Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|-------------------|---|----------------------------------|-------------------------|--|----------------------|
| LOWENTRY | Conducted consultation on problems of low altitude navigation. Included obtaining a presentation by R.E.P. Lewis, Canadian Defence Research Lab., covering relevant studies | Dept. of Tactics, USAAVNS | Feb 64 | Maj. Haid Dr. Prophet Dr. Wright Dr. Gray Mr. Waller Mr. Pauley | 4 |
| LIFT* INTACT** | Conducted presentation on the subject of flight proficiency measurement to instructor personnel and students of the Standards Div. Dept. of Advanced Fixed Wing Training. | USAAVNS | Apr 64 | Dr. Prophet | 1 |
| Not Task-Related | Participated in the preparation and review of the USAAVNTBD Plan of Test for the LOH and submitted a section outlining our specific activities proposed for the human factors evaluation of the LOH aircraft. | USAAVNTBD | Apr-Jun 64 (Continuing) | Dr. Wright Dr. Gray Mr. Boyd Mr. Pauley Mr. Jolley Mr. Waller 4 enlisted men | 220 |
| Not Task-Related | Participated in Army Aviation Human Factors Working Group. | Army Human Factors R&D Committee | Apr-Jun 64 (Continuing) | Dr. Wright Mr. Boyd Mr. Pauley | 15 |
| Not Task-Related | Prepared a Human Factors Evaluation Report on the FD-105C Integrated Flight System. | USAAVNTBD | Jun 64 | Dr. Wright Mr. Waller | 4.5 |
| Not Task-Related | Assisted in Terrain Avoidance Display Evaluations. | USAAVNTBD | Jun 64 (Continuing) | Dr. Wright | 1.5 |
| Not Task-Related | Reviewed and submitted comments on a draft SDH for a Miniaturized Navigation Display for Army aviation. | USACDCAVNA | Jun 64 | Dr. Wright | 3.5 |

*Completed Task.

**Task not in FY 64 Work Program.

Table 6 (Continued)
Aviation Human Research Unit

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|---------------------------------|---|---|-------------------|---|----------------------|
| Not Task-Related | Assisted in evaluating Radar Altimeters. | USAAVNTBD | Jun 64 | Dr. Wright Mr. Bnyd | 1.5 |
| Both Task- and Not Task-Related | Conducted consultations (35 of one-half-day or less), reviewed technical papers, human factors evaluations, literature searches, and assisted with various aviation problems. | Mainly USAAVNS agencies, but also USACDCAVNA; USAAVNTBD; Allied military; industry; University scientists; etc. | Jul 63- Jun 64 | All professional staff members participated in one or more. | 13 |

Table 7
Language and Area Training Division

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|---|------------|---|----------------------|
| CONTACT | Discussed and explained interrogation procedure used in Task CONTACT. | DIA | Jul 63 | Dr. Rocklyn | 0.75 |
| Not Task-Related | Made critical review of a programmed text, "Safeguarding Classified Information." | Continental Air Command, Andrews AFB | Jul 63 | Dr. Rocklyn | 1.25 |
| Not Task-Related | Reviewed experiment and advised on composition and content of report. | DIA | Jul 63 | Dr. Rocklyn | 2 |
| Not Task-Related | Consulted on TALOR program. | Schools Div., USCONARC | Jul 63 | Dr. Rocklyn | 2 |
| CIVIC | Prepared illustrations of problems in cross-cultural effectiveness as resource aids to Army Instructors making lesson plans in the Civic Action/Area training/MAAG areas. | U.S. Civil Affairs School, Fort Gordon, Ga. | Jul-Aug 63 | Dr. Foster | 20 |
| Not Task-Related | Reviewed systems literature and correspondence; studied Personnel Data Forms. | DIA, WCB | Jul-Sep 63 | Dr. Leedy | 7 |
| Not Task-Related | Reviewed status of statistical analyses of data obtained from DIA, WCB in connection with its study of the assessment of oral language proficiency of large numbers of personnel. | DIA, WCB | Jul-Oct 63 | Dr. McCrary | 8 |
| Not Task-Related | Consulted with USACDC personnel to aid in their planning and conduct of a survey to determine maintenance man hours available per year as related to kind of unit and other factors. | USACDC | Oct 63 | Dr. Brown (assisted Dr. MacCaulin of TM)) | 0.5 |

Table 7 (Continued)
Language and Area Training Division

| Task or Activity | Nature of TAS | Requesting Agency | Date | Advisory Personnel | Time Expended (days) |
|------------------|--|-----------------------|-------------------------------------|--------------------------|----------------------|
| Not Task-Related | Prepared short course on "Morale and Its Measurement" for presentation to Vietnamese officers. | | Oct 63 | Dr. Brown | 0.5 |
| Not Task-Related | Provided assistance for data collection and analysis for DLI, WCB. Reviewed report supplied by DLI. Established a system for monitoring foreign language training. | DLI | Oct 63- Apr 64 | Dr. Leedy Dr. Rocklyn | 79 |
| Not Task-Related | Consulted regarding the relationship between the Army Language Aptitude Test and foreign language performance. Included provision of data and plan of analysis. | DIA | Jan 64 | Dr. Rocklyn | 1 |
| Not Task-Related | Specified language training requirements for U.S. personnel in Vietnam. | DLI | Apr- Jun 64 | Dr. Fiks Dr. Hoech | 5 |
| Not Task-Related | Assisted in devising a method for conducting a Dept. of Defense survey of foreign language training. | DLI | May- Jun 64 | Dr. Leedy Dr. Hoech | 18 |
| Not Task-Related | Planned improved procedures for resolving "student load" problems, i.e., maintaining up-to-date account of students, training, and course changes. | DLI | Jun 64 | Dr. Leedy | 16 |
| Not Task-Related | Consulted on factors contributing to the effectiveness of units consisting of both U.S. and Korean personnel. | HQ Eighth Army, Korea | Apr- Jun 64 (Con- tinuing) | Dr. McCrary | 65 |

REPORT ON TECHNICAL ADVISOR⁷/
SERVICES, FISCAL YEAR 1964

J. C. Rags